

CLAIMS

What is claimed is:

1. A method of recording data in a defective area of an optical storage medium, the method comprising:

detecting a write start address in response to a write command;

checking, when the write start address is not detected due to unstable servo control signals during the detection of the write start address, whether a specific area at the write start address is a defective area;

continuing to detect the write start address while disabling a register which checks whether the servo control signals are stable when the specific area is determined to be the defective area;

recording previously-generated data in the specific area when the write start address is detected and enabling the register which checks whether the servo control signals are stable;

determining a replacement address for the write start address while the register which checks whether the servo control signals are stable is enabled; and

recording data at the replacement address.

2. The method of claim 1, further comprising recording data in the specific area when the write start address is detected with stable generation of the servo control signals.

3. The method of claim 1, wherein whether the servo control signals are stable or unstable is determined by one of comparing the level of a focus servo control signal with a reference level, determining whether a wobble synchronization signal providing absolute time in pregroove (ATIP) information is not detected at a desired position due to an unstable wobble signal before recording data, and determining whether the amount of changes in the ATIP information does not fall within a predetermined range.

4. The method of claim 1, wherein the previously-generated data is dummy data.

5. The method of claim 1, wherein the optical storage medium is a CD-RW to which data is repeatedly rewritable.

6. An apparatus for recording data in a defective area of a CD-RW, comprising:
a pickup that records data on the CD-RW;
a record signal processor that converts an external signal into recordable data and sends the recordable data to the pickup;
a servo that controls servo operations for recording the data processed by the record signal processor on the CD-RW; and
a controller that disables a register which checks whether the servo operations are stable when an unavailable area is detected during detection of a write start address, detects the write start address, generates data while the register is disabled and causes the pickup to record the generated data at the write start address, enables the register, and causes the pickup to record the data at a replacement address that is a substitute for the write start address.

7. The apparatus of claim 6, wherein the controller causes the pickup to record the data at the write start address when the write start address is detected and a servo operation is stable.

8. The apparatus of claim 6, wherein the stability of the servo is determined by comparing the level of a focus servo control signal with a reference level.

9. The apparatus of claim 6, wherein the generated data is dummy data.

10. A computer readable storage medium encoded with processing instructions for performing a method of recording data in a defective area of an optical storage medium, the method comprising:

detecting a write start address in response to a write command;

checking, when the write start address is not detected due to unstable servo control signals during the detection of the write start address, whether a specific area at the write start address is a defective area;

continuing to detect the write start address while disabling a register which checks whether the servo control signals are stable when the specific area is determined to be a defective area;

recording previously-generated data in the specific area when the write start address is detected and enabling checking whether the servo control signals are stable;

determining a replacement address for the write start address while enabling the register which checks whether the servo control signals are stable ; and
recording data at the replacement address.

11. A controller for use in an apparatus having a pickup for recording data as in a defective area of a CD-RW, the controller comprising:

- a write start address detector that detects a write start address;
- a register enabler/disabler that disables and enables a register which checks whether servo operations are stable or unstable;

- a data generator that generates generated data while the register is disabled, the generated data being sent to the pickup to be recorded at the write start address;

- a replacement write start address determiner that determines a replacement write start address that is a substitute for the write start address and replaces the write start address with the replacement write start address; and

- a data recording initiator that causes data to be sent to the pickup to be recorded at the replacement write start address after a replacement write start address is determined,

- wherein the register enabler/disabler disables the register when a defect is detected at the write start address and enables the register after the generated data is recorded at the replacement write start address.

12. The controller of claim 11, wherein a defect is detected at the write start address when an unstable servo control signal is generated when the write start address detector detects the write start address.

13. A method of recording data in a defective area of an optical storage medium, the method comprising:

- detecting a write start address;
- checking, via a register, whether an area at the write start address has a defect;
- disabling the register while continuing to detect the write start address upon determining that an area of the write start address has a defect;
- recording previously-generated data at the write start address;
- enabling the register after the previously-generated data is recorded;

determining a replacement write start address after the previously-generated data is recorded;

recording data the replacement address.

14. The method of claim 13, wherein the checking comprises checking the stability of servo control signals and an area is determined to be defective when the write start address is not detected due to unstable servo control signals generated during the detecting of the work sheet address.

15. The method of claim 13, wherein the previously-generated data is dummy data.

16. An optical disc comprising:

a substrate having a plurality of areas identified by onto which data is recordable;
first data record recorded at an area identified by a write start address upon determining that an area of the write start address has a defect; and
second data recorded at one of an area identified by a write start address upon determining that an area of the write start address does not have a defect and an area identified by a replacement write start address upon recording the first data,
wherein the first data is previously-generated dummy data.